Amendment to the Claims:

1. (Original) A heating element assembly comprising; an axially elongated substantially flat bundle formed by a multiplicity of continuous axially extending carbon fibers, said bundle having upper and lower surfaces including generally flat upper and lower surface portions substantially parallel to each other and a predetermined electrical resistance per unit of axial length, and a dielectric sheath embracing said bundle along its axial length, and including a lower layer having an upper face bonded to said lower surface of said bundle and an upper layer having a lower face disposed in overlying direct contacting engagement and unconnected relation to said upper surface of said bundle.

2. (Original) A heating element assembly as set forth in claim 1 wherein said bundle comprises from several hundreds to several tens of thousands of individual carbon fibers.

3. (Original) A heating element assembly as set forth in claim 1 wherein said bundle comprises a carbon fiber tow having from 1 thousand to 50 thousand generally cylindrical carbon fibers each having a diameter ranging from 6 to 10 microns.

4. (Original) A heating element assembly as set forth in claim 1 wherein said bundle comprises a carbon fiber tow having 50 thousand generally cylindrical fibers each having a 7 micron diameter.

5. (Original) A heating element assembly as set forth in claim 1 wherein said sheath comprises a thermoplastic material.

6. (Original) A heating element assembly as set forth in claim 5 wherein said thermoplastic material comprises a polyester.

7. (Original) A heating element assembly as set forth in claim 6 wherein said polyester comprises MYLAR.

8. (Original) A heating element assembly as set forth in claim 1 where said sheath comprises a thermosetting material.

9. (Original) A heating element assembly as set forth in claim 1 wherein said thermosetting material comprises a polyimide.

10. (Original) A heating element assembly as set forth in claim 9 wherein said polyimide comprises KAPTON.

11. (Original) A heating element assembly as set forth in claim 1 wherein said upper and lower layers are formed by separate webs of dielectric sheet material arranged in face-to-face relation to each other with said bundle therebetween and said layers have marginal portions extending outwardly in opposite transverse directions beyond longitudinally extending side edges of said bundle and bonded together and sealed in face-to-face relation to each other.

12. (Original) A heating element assembly as set forth in claim 11 wherein said upper face of said lower layer is bonded to said lower surface of said bundle and said marginal portions are bonded in face-to-face relation to each other by pressure sensitive adhesive.

13. (Original) A heating element assembly as set forth in claim 11 wherein said upper face of said lower layer is bonded to said lower surface of said bundle and said marginal portions are bonded in face-to-face relation to each other by heat activated adhesive.

14. (Original) A heating element assembly as set forth in claim 11 wherein said marginal portions are bonded together by ultrasonic welds.

15. (Original) A heating element assembly as set forth in claim 11 wherein said webs are of equal transverse width.

16. (Original) A heating element assembly as set forth in claim 11 wherein said webs are of unequal transverse width.

17. (Original) A heating element assembly as set forth in claim 1 including coding means for visually distinguishing said bonded lower layer from said unconnected upper layer.

18. (Original) A heating element assembly as set forth in claim 17 wherein said coding means comprises a color code.

19. (Original) A heating element assembly as set forth in claim 1 wherein said bundle has a terminal end portion projecting axially outwardly beyond an associated end of said upper layer and said lower layer has a bundle stabilizing tab projecting axially outwardly beyond said associated end in underlying relation and bonded to said terminal end portion.

20. (Original) A heating element assembly as set forth in claim 1 wherein the thickness of said lower layer is greater than the thickness of said upper layer.

21. (Original) A heating element assembly as set forth in claim 1 wherein said bundle has an electrical resistance in the range of 0.1 to 3.0 ohms/linear foot.

22. (Original) A heating element assembly as set forth in claim 1 wherein said bundle has an electrical resistance in the range of 2 to 3 ohms per linear foot.

23. (Original) A heating element assembly as set forth in claim 1 wherein said bundle has a thickness to width ratio of approximately one to twenty-five.

24. (Original) A heating element assembly as set forth in claim 1 wherein said bundle and said dielectric sheath are flexible.

25. (Original) A heating element assembly as set forth in claim 1 wherein said upper and lower layers have substantially the same thickness.

26. (Currently Amended) A heating element assembly comprising; an axially elongated flexible carbon fiber tow having a generally flat configuration and including from 1 thousand to 50 thousand axially elongated generally cylindrical continuous rectilinear axially extending carbon filaments having a diameter from 6 to 20 microns and arranged in immediately adjacent parallel relation to each other, said tow having an electrical resistance of 2 to 3 ohms per linear foot, and an outer jacket of polyester sheet material including two layers of said sheet material arranged in ~~fact-to-face~~ facing relation to each other with said tow disposed therebetween, one of said two layers being a substantially flat planar layer, one of said two layers ~~layer~~ having a thickness greater than the thickness of the other of said two layers, said tow adhered to one of said two layers ~~said one layer~~, one of said two layers ~~said other layer~~ overlying said tow in direct contacting engagement and unconnected relation to said tow.

27. (Original) A heating element assembly comprising; a series of axially elongated axially parallel flexible carbon fiber tows of undetermined axial length each spaced from another and having interstacies therebetween, each of said tows including a multiplicity of continuous generally rectilinear axially parallel carbon filaments disposed in immediately adjacent relation to each other and having a predetermined electrical resistance per unit of tow axial length, and an outer insulating jacket of dielectric sheet material including a substantially flat planar first layer and a second layer, said tows adhered to said first layer, said second layer overlying said tows in direct contacting engagement with and unconnected relation to said tows and adhered in sealing relation to said first layer along said interstacies and along marginal portions of said outer insulating jacket immediately outboard of the outermost tows in said series.

28. (Original) A method of making a heating element assembly comprising the steps of; continuously advancing an axially elongated first web of dielectric sheet material in an axial direction, simultaneously continuously advancing an axially elongate carbon fiber tow in said axial direction, moisturizing the tow, guiding the tow into axial alignment and overlying adhering engagement with the advancing first web, adhering the tow to the advancing first web, continuously advancing a second web of dielectric sheet material into overlying relation with marginal portions of the first web and the tow adhered to the first web, and joining

only axially extending marginal portions of the first and second webs in face-to-face sealing engagement with each other to form an outer sheath containing the tow and embracing the tow along its axial length.

29. (New) A heating element assembly as set forth in claim 26 wherein one of said two layers is wider than the other of said two layers.

30. (New) A heating element assembly as set forth in claim 26 wherein said tow has an electrical resistance of 2 to 3 ohms per linear foot.

31. (New) A heating element assembly as set forth in claim 26 wherein said carbon filaments have a diameter of substantially 7 microns.

32. (New) A heating element assembly as set forth in claim 26 wherein said polyester sheet material comprises KAPTON.

33. (New) A heating element assembly as set forth in claim 26 wherein said tow has a terminal end portion projecting axially outwardly from said outer jacket and one of said two layers has a tow stabilizing tab having a width substantially equal to the width of said tow and projecting axially outwardly from said outer jacket in underlying relation to said terminal end portion and bonded to said terminal end portion.

34. (New) A heating element as set forth in claim 33 wherein said tow and said outer jacket are flexible.

35. (New) A heating element assembly comprising; a flexible generally flat carbon fiber tow having a multiplicity of continuous generally rectilinear parallel carbon fibers extending in an axial direction, said tow having substantially flat upper and lower surfaces parallel to each other and a predetermined electrical resistance per unit of axial length, and an axially elongated outer jacket of dielectric sheet material including two layers of said sheet material arranged in face-to-face relation to each other with said tow disposed therebetween, said two layers having marginal portions projecting outwardly in axially transverse directions from opposite sides of said tow, said marginal portions being bounded together and sealed in face-to-face

relation to each other and extending in axial directions along said opposite sides of said tow, one of said two layers being bonded to one of said surfaces comprising said upper surface and said lower surface, one of said two layers being disposed in overlying direct contacting engagement and unconnected relation to one of said surfaces comprising said upper surface and said lower surface.

36. (New) A heating element assembly as set forth in claim 35 wherein one of said two layers is a substantially flat planar layer.